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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,673	10/11/2000	Hisashi Mitamura	198337US3	3794

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1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

MACKEY, JAMES P

ART UNIT	PAPER NUMBER
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1722

17

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Applicati n No.

09/684,673

Applicant(s)

MITAMURA, HISASHI

Examiner

James Mackey

Art Unit

1722

nk.17  
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 June 2003 has been entered.
2. The terminal disclaimer filed on 17 June 2003, disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 6,196,819, has been reviewed and is accepted. The terminal disclaimer has been recorded.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 11-245231 in view of Irie (U.S. Patent 5,820,885; Figs. 12-13; col. 12, lines 37-59).

Japan '231 discloses a tire vulcanizing equipment comprising a vulcanizing station having a housing shelf with plural stages of circularly arranged placing parts for placing tire mold assemblies, including piping for supplying and discharging heating medium to the mold assemblies; an opening and closing station having a placing part for placing a tire mold assembly, an opening/closing device for opening and closing the tire mold assembly placed on the placing part of the opening and closing station, a green tire loader for loading green tires from a supply line to the tire mold assembly and a vulcanized tire unloader for unloading

vulcanized tires from the tire mold assembly to a removal line; an auxiliary opening and closing station; and a transfer station for transferring the tire mold assembly between a selective one of the placing parts of the housing shelf and the placing part of the opening and closing station by a rotating action of a rotatable transfer device of the transfer station. Japan '231 does not disclose that the housing shelf of the vulcanizing station has plural vertical stages of the placing parts for placing the tire mold assemblies, and does not disclose the transfer station being vertically movable along the housing shelf to selectively retrieve tire mold assemblies from one of the vertically arranged placing parts of the housing shelf by a rising and falling action of the transfer station. Irie '885 discloses a tire vulcanizing equipment including a vulcanizing station having a housing shelf with plural vertical stages of placing parts for placing tire mold assemblies, including piping for supplying and discharging heating medium to the mold assemblies (see col. 12, lines 41-44); an opening and closing station having a placing part for placing a tire mold assembly, an opening/closing device, a tire loader and a tire unloader; an auxiliary opening and closing station; and a transfer station for transferring the tire mold assembly between a selective one of the vertical stages of placing parts of the housing shelf and the placing part of the opening and closing station, wherein the transfer station is vertically movable along the housing shelf (note especially col. 12, lines 55-58, which refer to raising and lowering the transfer station or "carrying surface" to vertically align with a "lower mold base" and an "upper mold base"--see element 14 in Fig. 13 and col. 12, lines 40-41, referring to "a base 14 to which a plurality of mold bases are assembled"). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Japan '231 by providing the housing shelf with plural vertical stages of placing parts, with the transfer station including means for vertically moving the

transfer station along the housing shelf to selectively retrieve the tire mold assemblies from one of the vertically arranged placing parts of the housing shelf, as disclosed in Irie '885, thereby increasing productivity while minimizing factory floor space.

5. Applicant's arguments filed 17 June 2003 have been fully considered but they are not persuasive.

Applicant argues that the vertically movable transfer station of Irie '885 ("mold carriage" 13) travels along rails 4 and is therefore incapable of rotating; however, Japan '231 discloses a transfer station having a rotatable transfer device for communicating with respective placing parts of the vulcanizing station in order to deliver or retrieve mold assemblies from the placing parts of the vulcanizing station, and it would have been obvious to a skilled artisan to modify Japan '231 by providing the vulcanizing station with plural vertical stages of placing parts, with the transfer device of the transfer station being vertically movable between the plural vertical stages of the vulcanizing station, as disclosed in Irie '885, in order to increase productivity while minimizing factory floor space.

Applicant argues that the combination of teachings of Japan '231 and Irie '885 would not have been obvious to a skilled artisan because the transfer station ("mold carriage" 13) of Irie '885 must travel linearly due to the mold carriage being designed to carry two tire mold assemblies (as described at col. 12, lines 52-54 and 60-67). However, a skilled artisan would have understood the teachings of Irie '885 (in the embodiment of Figs. 12-13) as having two separate features to increase productivity, one being a vertically movable mold carriage transfer device cooperating with plural vertical stages of placing parts ("mold bases") of the vulcanizing station, and the other being a mold carriage transfer device designed to carry two tire mold

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assemblies (side-by-side). Note col. 12, lines 49-56, reciting that, in the "third embodiment" of Figs. 2-13, the carriages 13 are guided on rails 4 in a

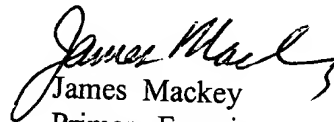
*"configuration [that] is the same as that of the second embodiment, but the mold carriage of the third embodiment can carry two tire molds M. Further, unlike the second embodiment, the carrying surface can be raised and lowered."*

A skilled artisan would have considered each of these two features to have utility in a tire vulcanizing system for beneficial increases in productivity, and therefore a skilled artisan would have considered the vertically movable transfer device communicating with plural vertical stages of a housing shelf, as disclosed in Irie '885, to be applicable in a vulcanizing system having a rotatable transfer device as disclosed in Japan '231, for the readily-understood benefits of increased productivity and minimized factory floor space, without requiring that the transfer device also be capable of carrying two mold assemblies side-by-side.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mackey whose telephone number is 703-308-1195. The examiner can normally be reached on M-F, 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
James Mackey  
Primary Examiner  
Art Unit 1722

7/26/03

jpm  
July 26, 2003